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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/631,316	07/31/2003	Daniel L. Woodell	03CR095/KE	1895

7590 05/10/2004  
Rockwell Collins, Inc.  
Attention: Kyle Eppele M/S 124-323  
400 Collins Rd. NE  
Cedar Rapids, IA 52498

EXAMINER

ALSOMIRI, ISAM A

ART UNIT PAPER NUMBER

3662

DATE MAILED: 05/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/631,316	Applicant(s) WOODELL, DANIEL L.	
	Examiner Isam A Alsomiri	Art Unit 3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

**Claims 1-16 and 19-20 are rejected under 35 U.S.C. 102(a) as being anticipated by Nicosia et al. US 2002/0147544. Referring to claims 1, 7, and 15,** Nicosia discloses in figures 1, 7, and 8 an airborne radar system, comprising; a radar antenna (inherent), radar circuitry coupled to the radar antenna 8, a runway database comprising runway location information 10, a processing device retrieving from the runway database 16, runway location information for a runway being approached by an aircraft 6, based on the location of the aircraft, and directing a radar beam defined by a polygon (runway) which represents the runway and which is derived from the runway information (see figure 7, “known vectors” and “map match scenes”), the processing device determining whether there are any obstacles on the runway (page 6 [0091]).

**Referring to claims 2 and 10,** Nicosia discloses in figures 1, 7, and 8 the location of the aircraft is provided using a position sensor 6 in communication with the processing system 16.

**Referring to claims 3, 11, and 20,** its inherent that the polygon (runway) is defined by latitude and longitude. Furthermore, the runway inherently is a polygon shape, and using scene matching and the stored location database, the runway is defined by latitude and longitude.

**Referring to claims 4 and 12,** Nicosia discloses in figures 1, 7, and 8 the runway database is on board the aircraft 10.

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**Referring to claims 5, 13, and 19**, Nicosia discloses in figures 1, 7, and 8 its inherent that the radar beam is a beam sharpened compressed radar (see page 2 [0021]).

**Referring to claims 6 and 14**, Nicosia discloses in figures 1, 7, and 8 it's inherent that the processing device determines the direction of the radar beam based on the location of the Polygon using the GPS and some of the many map match scenes, to point to the polygon runway (see figure 7).

**Referring to claim 8**, Nicosia discloses in figures 1, 7, and 8 the sensing device comprises a synthetic vision device (see page 2 [0031]).

**Referring to claim 9**, Nicosia teaches the sensing device comprises a millimeter wave sensing device (see page 1 [0002] and [0016]).

**Referring to claim 16**, Nicosia discloses in figures 1, 7, and 8 determining the location of the obstacle within the perimeter of the runway location (see page 6 [0091]).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nicosia et al. US 2002/0147544.** Nicosia teaches detecting obstacle on the runway prior to landing; its inherent that the system communicates the presence of an obstacle to a pilot of the aircraft including an audio alert and other alerting method to assure the pilot of the obstacle.

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However, even if it's not inherent in Nicosia's system communicating obstacle information and having an audio alert to the pilot is very well known in aircraft landing system. It would have been obvious to modify Nicosia's system to include communicating the presence of an obstacle to the pilot and having an audio alert to the pilot to avoid accidents and to make sure the pilot is aware of the obstacle.

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited to (Zeineh; Robert et al.; Smithey; Staggs et al.; Corcoran, III; Ammar et al.; Nicosia et al. '698; Faivre et al.; Basov et al.) show various landing radar system onboard the aircraft including GPS receivers and verifying a runway (polygon) for landing.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isam A Alsomiri whose telephone number is 703-305-5702. The examiner can normally be reached on Monday-Thursday and every other Friday (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas H Tarcza can be reached on 703-306-4171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Isam Alsomiri

May 3, 2004



THOMAS H. TARCZA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600